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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,242	01/19/2005	Eleanor Bernice Ridley	HP/15-22715/A/MA 2224/PCT	6482
324	7590	07/30/2008	EXAMINER	
JoAnn Villamizar Ciba Corporation/Patent Department 540 White Plains Road P.O. Box 2005 Tarrytown, NY 10591			ROGERS, JAMES WILLIAM	
			ART UNIT	PAPER NUMBER
			1618	
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			07/30/2008	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/523,242	<b>Applicant(s)</b> RIDLEY ET AL.	
	<b>Examiner</b> JAMES W. ROGERS	<b>Art Unit</b> 1618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 14 May 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

Applicants amendments to the claims filed 05/14/2008 has been entered.

#### ***Response to Arguments***

Applicant's arguments, see Applicant Arguments/Remarks Made in an Amendment, filed 05/14/2008, with respect to 102(b) rejection Cockcraft have been fully considered and are persuasive. As applicants rightly assert Cockcraft is silent on preparing the copolymers by emulsion polymerization and only makes the polymers in an aqueous solution. The rejection over Cockcraft has been withdrawn.

**Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green et al. (US 6,365,656) in view of Cockcroft et al. (WO 02/40622) in view of Lentini et al. (US 5,665,368), for the reasons set forth in the previous office action filed 01/11/2008.**

Applicant's arguments filed 05/14/2008 have been fully considered but they are not persuasive.

Applicants assert none of the references cited by the examiner above disclose preparing the copolymers by an emulsion polymerization technique. Furthermore applicants assert Green specifically discloses the use of a reverse phase emulsion polymerization, which applicants take to mean that the monomers are dispersed in a hydrophobic liquid phase as opposed to their claimed invention which states the monomers are dispersed in the aqueous phase.

The examiner would firstly like to note that applicants claimed emulsion polymerization technique involves combining monomers I and II in an aqueous phase which is then mixed with an oil phase and polymerized. Green specifically discloses at column 7 lines 9-27 that the reverse phase emulsion is prepared by adding one **aqueous** ethylenically unsaturated monomer into a hydrophobic liquid with sufficient agitation to form a stable emulsion. Thus the procedure of Green teaches the same technique claimed by applicants in that it adds an aqueous solution containing the monomers to a hydrophobic phase which forms an emulsion. Furthermore Green specifically recites that the monomer blend must be water soluble and the hydrophobic liquid must have substantially no solvating effect on the polymer. See col 5 lin 4-17. Applicants claims at least as currently amended do not preclude the method of Green.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3,5-9 and 13-14 are rejected under 35 U.S.C. 102(b) as being anticipated by Robinson et al. (EP 247,774 A2), this new rejection was necessitated by applicants amendments to the claims.

Robinson teaches water-in-oil emulsions containing cationic water-soluble copolymers comprised of a nonionic monomer (including n-methylmethacrylamide) and cationic monomers (including dimethylaminoethylmethacrylate DMAE(M)A). See

abstract, pag 2 lin 30-pag 4 lin 3 and claims 1-6 and 11. Robinson teaches that the emulsion is formed by adding an aqueous solution containing the non-ionic monomer and some of the ionic monomer, emulsifying the aqueous solution in a hydrocarbon oil, adding the balance of the rest of the cationic monomer to the solution and polymerizing the monomers. See pag 2 lin 15-29 and claim 1. Regarding claims 2-3 and 8-9, Robinson teaches that the amount of nonionic monomer is preferably at least about 30% of the copolymer (thus the copolymer is a 70/30 mixture of ionic and nonionic monomers). See pag 3 line 34-pag 4 lin 6 and examples.

***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Green et al. (US 6,365,656) in view of Robinson et al. (EP 247,774 A2), this new rejection was necessitated by applicants amendments to the claims.

Green discloses liquid dispersions containing polymers dispersed in a di- or triglyceride oil that are particularly useful in personal care compositions. The polymer may be a cationic copolymer formed from cationic monomers including dialkylaminoalkyl (meth)acrylate quaternary ammonium chlorides such as the ammonium salt of DMAE(M)A, thus meeting the limitations of monomer I within claims 1,5,7,9 and 13. See col 5 lines 26-44. The cationic copolymer could further comprise non-ionic monomers including acrylamide and methacrylamide. See col 5 lines 45-46. The polymers were advantageously crosslinked with diethylenically unsaturated

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compounds preferably methylene-bis-acrylamide in amounts ranging from 100 to 10,000 ppm, most preferably from 500-900 ppm. See col 5 line 64-col 6 line 11. Thus Green discloses the same crosslinkers such as methylene-bis-acrylamide as applicant's claims 1,4,7-9 and 15 and the amounts disclosed overlap applicants claimed range. Green discloses that polymers are sufficiently crosslinked to swell but not dissolve in water and further discloses the optimum amounts of crosslinker can be found by routine experimentation. See col 2 lines 64-66 and col 6 lines 10-11. Thus the amount of crosslinker claimed would be obvious to find through routine and ordinary experimentation to optimize the concentration of crosslinker in order to provide the desired solubility to the polymer so that it swells upon exposure to water but does not dissolve. Regarding claims 2,3,8,9 and 15 which limit the % wt of monomer I and II within the copolymer, Green discloses that the cationic monomer (corresponds to monomer 1) is more than 50% of the polymer and most preferably at least 80% by weight, thus the remainder 20% would be comprised of the nonionic monomer, the amounts above are within applicants claimed range.

Green while disclosing nonionic monomers such as acrylamides is silent on the use of acrylamides that meet the proviso within applicants claim 1 that at least one of  $R_6, R_8$  and  $R_9$  is  $C_1-C_4$  alkyl for monomer II. Green while disclosing the use of oils in personal care compositions does not disclose the amounts of copolymer or oil component within applicants claimed range within dependent claims 11-12. While as argued above by the examiner Green does disclose the same method to make the

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copolymer emulsion, alternatively it also would have been obvious to use an emulsion polymerization in view of the Robinson reference.

Robinson is disclosed above. Robinson disclosures that cationic copolymers containing cationic monomers such as DMAE(M)A and nonionic monomers including methacrylamide derivatives such as n-methylmethacrylamide were already well known at the time of applicants claimed invention. Thus the claimed copolymer would have been *prima facie* obvious because the substitution of one known element such as the non-ionic acrylamides disclosed within Green for another known element such as the specific nonionic acrylamides such as n-methylmethacrylamide disclosed within Robinson would have yielded predictable results to one of ordinary skill in the art at the time of the invention. Robinson also discloses that the amount of oil used within the emulsion composition was preferably 15-30% of the composition. See page 4 lin 13-24. As described above Robinson does describe making cationic polymers by adding an aqueous composition comprising the water soluble ionic and nonionic monomers to an oil phase and then polymerizing the emulsion. One of ordinary skill in the art would have a reasonable expectation of success in using the technique of Robinson to make the polymers of Green since the polymers are within the same scope (cationic polymers containing non-ionic acrylamide and cationic quaternary ammoniums). Thus the claimed invention would have been *prima facie* obvious since all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions and the

combination would have yielded predictable results to one of ordinary skill in the art at the time of the invention.

### ***Conclusion***

No claims are allowed at this time.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP §706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James W. Rogers, Ph.D. whose telephone number is (571) 272-7838. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Hartley can be reached on (571) 271-0616. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent



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Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Michael G. Hartley/

Supervisory Patent Examiner, Art Unit 1618